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1. Introduction

This manual identifies the procedures to be performed when DME experiences a Primary Control Center failure that impacts DME's operations, and the procedures required to ensure the system is ready for such a failure, and ensures DME can continue its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost.

1.1 Requirements

DME shall use this process and the "Emergency Operations Plan" (EOP) for relocation to the backup facility to continue reliable operations in the event the Primary Control Center becomes inoperable; these operations shall not rely on data or voice communication from the primary control facility to be viable.

This process and the "Emergency Operations Plan" (EOP) address the following items for the DME Control Center:

- Monitoring and control of critical transmission facilities
- Voltage control
- Control of critical substation devices
- Logging of significant power system events

The critical facilities identified for this standard may be different than the Critical Assets identified for the CIP standards. No critical facilities are identified for DME.

This process includes procedures and responsibilities for maintaining basic voice communication capabilities with other areas, and includes procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.

This process includes procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the Control Center Backup Process.

DME shall review and update annually its Control Center Backup Process.

DME shall include interim provisions if it is expected to take more than one hour to implement this process for loss of primary control facility.

1.1.1 Purpose

DME is dedicated to maintaining the delivery of electrical energy to its customers in the event of major problems associated with a natural disaster or other catastrophic event that would damage the Primary Control Center. The Primary Control Center houses transmission system operations,

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metering functions, Supervisory Control and Data Acquisition (SCADA), and other vital functions and data. It also serves as communications headquarters.

The purpose of this process is to establish procedures that DME Control Center personnel should follow in the event of complete or partial damage to the Primary Control Center and its equipment. Operators may deviate from this process if they are unable to follow the procedures.

This process and associated plans are for guidance and are <u>required</u> steps that must be followed if possible, but under some unexpected situations Operator, Supervisory, and Management experience may be necessary to properly maintain reliable operations of the electric system.

This process has been developed by representatives of the following DME departments: SCADA, Engineering, System Operations, and Technology Services.

This process shall be reviewed and updated annually and shall meet the following minimum requirements:

- Description of actions to be taken by DME personnel to avoid placing a prolonged burden on Bulk Electric System (BES).
- Description of specific functions and responsibilities to be performed to continue operations from an alternate location.
- Includes procedures and responsibilities for maintaining basic voice communications capabilities with ERCOT.

•	Includes procedures fo	r backup control	function testing	and the training	of personnel.
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1.2 Related Documents

NERC Reliability Standards

- EOP-008-2 Loss of Control Center Functionality
- EOP-004-4 Event Reporting



DME RELIABILITY PROCEDURES MANUAL				
Control Center Backup Process	Version Number 03.10			
Effective Date: Nov 2010	Version Date: February 2022			

1.3 Process Diagram



- Pink shapes are data storage
- Green shapes are process initiators
- Each shape in the DME lanes represents a procedure documented below

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3. Forms

3.1 Backup Control Center Checklist (blanks kept in SharePoint – NERC Forms)

Control Center, Back	ıp Con	trol Cei	nter Chec	ks and DRILL	
date DRILL performed: time DRILL (or checks) initiated: time BUCR activated; time BUCR de-activated;	date DRILL performed: time DRILL (or checks) initiated: time BUCR activated:		N/Ağ nat for 2 hr annuai test N/Ağ nat for 2 hr annuai test	NOTES: this DRILL is performed Quarterly as System Operators rotate onto the Training Shift. If no System Operator is scheduled for the DRILL as training, then the checks are made to verifiy BUCR readiness. Once per year, at a minimum, the BUCR must be staffed and checked for functionality for two hours minimum. These checks and DRILL are based on compliance with NERC Reliability Standards COM-001, COM-002, EOP-005, and EOP-008	
item (see Attachment A of process for	Main CR -		Needs work (note		
details)	SAT	BUCR - SAT	Main or BUCR)	Comments/Work Initiated to correct deficiencies	
"Go Bag" ready and obtained					
Operator Entry acquired					
SCADA Login and operation					
OMS/Calls Manager/DisSpatch/ Telesuite/PorcheOCM	r				
ERCOT Network Phones and ICCP					
Satellite Phone					
Radio System					
Standard Phones					
TOP phones - line to GP&L/TMPA					
Weather Channel on Internet			ſ		
UPS					
Door Locks					
HVAC					
City computer applications: Work orders, North Star, Shared drive, SharePoint, Citrix access platform, e-mail					
				1	
Operator:					
Trainer:					
	print name			signature	
Filing note: File name format: Example file name:	once comple year, month 20120301 B	eted, store this n, day BUCR DF SUCR DRILL.pdf	<i>document in Sha</i> i RILL	ePoint>Records>Reports>Drills folder	

revised 3/04/2014



4. Document Control

Prepared by:

KEMA Inc	04/01/2010
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Change History:

The change history below reflects changes to the Manual or its structure.

Version	Description of Change	Date
V 01.00	Initial version	4/21/2010
V 01.01	Incorporation of Backup Dispatch Control Plan	6/10/2010
V 02.00	Addition of TOP	10/14/2010
V02.01	Ensured integration with "Emergency Operations Plan" (EOP) for Relocation to Backup Facility	2/10/2012
V03.00	Changed quarterly inspect to Operations responsibility; made process self-contained in combination with use of EOP	3/14/2012
V03.01	Editorial revisions; removed "liaisons" replaced with "Operations management"; added "as soon as practical" requirement to initial notifications; added Approved Phone List reference	7/25/2012
V03.02	Clarify critical facilities statement	12/20/12
V03.03	Corrected Typos	3/14/13
V03.04	Revised to EOP-008-1	6/28/2013
V03.05	Revised to change the Form, remove the previous Checklist, and added new Attachment A which provides details for the form, former Attachment A is now Attachment B, Att. B is now Att. C	3/04/2014
V03.06	Added phone numbers for compliance	2/5/2015
V03.07	Added electronic reader	2/23/2016
	No changes	Feb 2017
V03.08	Removed Galen, correct form location to section 3.1	Feb 2018
	Reviewed. No Changes	1/4/2019
	Reviewed new standard version EOP-008-2 and EOP-004-4 effective 4/1/19 – No changes	March 2019
V03.09	Standardized language; removed unnecessary names of contacts; updated information (JGL)	11/26/2019
V03.10	Updated titles and information	2/22/2022



Review Log:

This document shall be reviewed no greater than every 15 calendar months or as needed.

Reviewed By	Title	Date
Galen Gillum	Compliance Manager	Nov 2011
Galen Gillum	Compliance Manager	2/12/2012
Galen Gillum	Compliance Manager	1/16/2013
Galen Gillum	Compliance Manager	6/28/2013
Galen Gillum	Executive Manager	3/04/2014
Smith Day	Compliance Manager	Feb 2015
Smith Day	Compliance Manager	March 2016
Smith Day	Compliance Manager	March 2017
Smith Day	Compliance Manager	March 2018
Cameron Molsbee	Compliance Officer	January 2021
Jonathan Love	Sys-Ops Supervisor	February 2022



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5.

Attachment A – BUCC DRILL/Training Checks Details



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6. Attachment B - Backup Control Center Status Checks

The DME Back-up facility is available 24 hours per day, 7 days per week, and 365 days per year. The Backup Control Center is fully capable of maintaining communications with ERCOT and with DME Crews. SCADA and full access to the internet, including the City of Denton HUB, are available.

DME System Operations employees, full, part time and contracted, have access to the DME Backup Control Center through the City of Denton security card access entry program.

In the event of an emergency, actual event, or for testing, DME System Operations employees are directed to the Backup Control Center and will remain at the Backup Control Center until notified to return to the Primary Control Center by an Authorized DME Supervisor.

The DME Backup Control Center facility is inspected every quarter by DME System Operations Department who will test and verify the operations listed in the Backup Control Center Check List. The date of the inspection is documented as well as the time in and time out in DME System Operations folder located at the Backup Control Center.



Version Number 03.10 Version Date: February 2022





2022 Black Start Plan

Effective Date: 1/1/2022

Version 1

Divisions of Electric

Operations, Substations, System Operations, Metering, Construction, Engineering, Communications & Administration

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- I. Purpose
- II. Scope
- III. Definitions
- IV. Key Personal Roles and Responsibilities
- V. Contact Information
- VI. Strategies
- VII. Priorities
- VIII. Operations
- IX. Recovery

I. Purpose

The purpose of the Denton Municipal Electric (DME) Black Start Plan is to coordinate a restoration effort with ERCOT and neighboring Transmission Operators in case of a partial or complete collapse of the ERCOT system. The timely implementation of the DME Black Start Plan in conjunction with the ERCOT Black Start Plan will ensure restoration of service to the ERCOT System at the earliest possible time. This plan ensures that facilities and personnel are prepared to enable system restoration from black start resources to assure reliability is maintained during restoration and priority is placed on restoring the Interconnection. During normal operations DME System Operators (DSO) do interact with generation resources directly. The standard operating procedure for system restoration in a black start event is for the DSO to be responsible for communications with the QSE, Black Start Resources as well as ERCOT, to bring generation units on-line and provide electrical paths for restoration of the system.

II. Scope





III. Definitions

Cranking Path- a set of elements in the ERCOT system that establishes an electrical path from a contracted Black Start Resource to a designated next start Resource.

ERCOT Contracted Black Start Unit- The resource is contracted by ERCOT as a Black Start Unit and is used for powering next start units.

Critical Load- Emergency public services such as police, fire, hospitals, etc.

Island- An electrically separated portion of the ERCOT system with independent frequency, generation and load.

Partial Blackout- An uncontrolled separation of a portion of the ERCOT system, where a portion of the ERCOT system has lost frequency, and generation resources within that portion of the system are not serving load.

Blackout- A condition in which frequency for the entire ERCOT System has dropped to zero

DCSES- Decordova Steam Electric Station

TGCCS- Tenaska Gateway Combined Cycle Station

ONCOR –Oncor Electric Delivery

BPEC- Brazos Electric Power Cooperative

RCEC- Rayburn Country Electric Cooperative

TNMP- Texas New Mexico Power Company

Garland- City of Garland Power and Light

DME- Denton Municipal Electric

TMPA- Texas Municipal Power Agency

TOP- Transmission Operator

DSO – DME System Operators

IV. Roles and Responsibilities



B. Generation Resources



C. Generation Control (QSE)



V. Contacts

A. ERCOT

Redacted		
	_	
	 _	
	 _	
	 _	



- C. Non-Contracted Generation Resources
 - i. None

D. Interconnecting Transmission Operators

i. Entities involved in Black Start Plan



ii. Satellite Phone Number List



iv. ERCOT Satellite phones



Reclactec



VI.

























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DENTON	DE RELIABILITY PROCESS MANUAL		
	2022 Black Start Plan	Approval Signatures	

Approved by:	Title:	Date:
Cles		10/27/21
Chris Lutrick	Executive Manager of Operations	
Magn-		19/27/21
SercyLopper	System Operations Manager	
	2	10/27/2021
Jonathan Love	System Operations Supervisor	
Cae 20		10/27/2021
Cameron Zahn	Outage Coordinator	

DENTON	DE RELIABILITY PROCESS MANUAL	
ELEGING Construction of the construction of th	2022 Black Start Plan	Approval Signatures

Approved by:	Title:	Date:
Chris Lutrick	Executive Manager of Operations	
Jerry Looper	System Operations Manager	
Jonathan Love	System Operations Supervisor	
Cameron Zahn	Outage Coordinator	